





SUSTAINABILITY 101



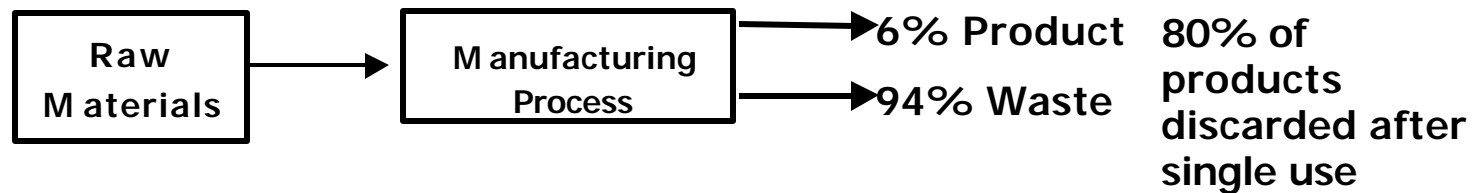
**HOUSTON WE HAVE A PROBLEM –
Humanity now exceeds the planet's
capacity to sustain its consumption of
renewable resources.**

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- ✱ Causes: Growing population, increased standard of living, economies based on consumption, urbanization of societies or lost conductivity to land/nature, rapid industrialization in developing countries.
 - ✱ Global overdraft of resources is temporarily being met by eating into the earth's capital stocks of forests, fish, fertile soils and minerals.

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- ✱ The earth's biosphere can no longer assimilate the waste load of humanity, water quality degradation and global warming are the marquee scientific challenges of our generation.
 - ✱ Ecosystems and the life they support are quickly disappearing, between 1970 and 2000 the earth's Living Planet Index declined 35%.
 - ✱ High competition for existing resources is a trigger point for global conflict.

Material Flows Today

Linear Industrial Processes: Waste is created faster than it can be reconstituted to quality resources. Take-make-waste

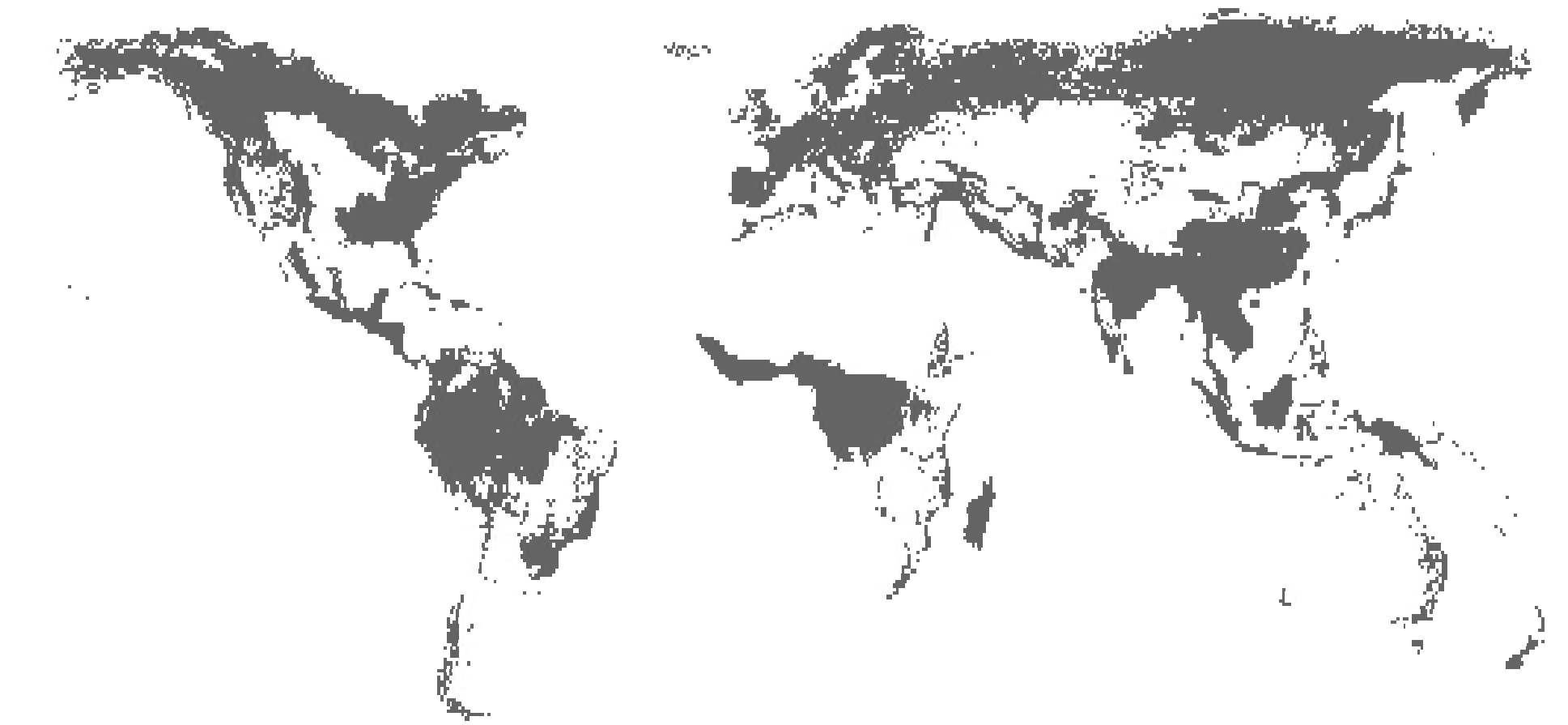


99% of original materials used in the production of, or contained in, the goods made in the US become waste within 6 weeks of sale.

Paul Hawken, *Factor 4*, 1997)

(Attributed to

Frontier Forests 8,000 Years Ago



Source: *World Resources 2000-2001*

Frontier Forests Today



Source: *World Resources 2000-2001*

SUSTAINABILITY IS . . .



- ✱ “Meeting the needs of the present without compromising the ability of future generations to meet their own needs” (*Brundtland Commission – Our Common Future, 1987*)
- ✱ A multifaceted approach to managing the earth’s environmental, economic, and social resources for the long term. Such as “Agenda 21”, the green action plan or blue print for sustainability produced by the United Nations Conference on Environment & Development.
- ✱ “An approach to ensure the long-term viability and integrity of the mission by minimizing resource needs, reducing environmental impacts, and managing resources as to provide realistic training environments” (*Fort Bragg working definition*)

Sustainability is a systemic approach to managing resources proactively today, to ensure their availability for tomorrow.

Evolution of Environmental Management

Sustainable Operations

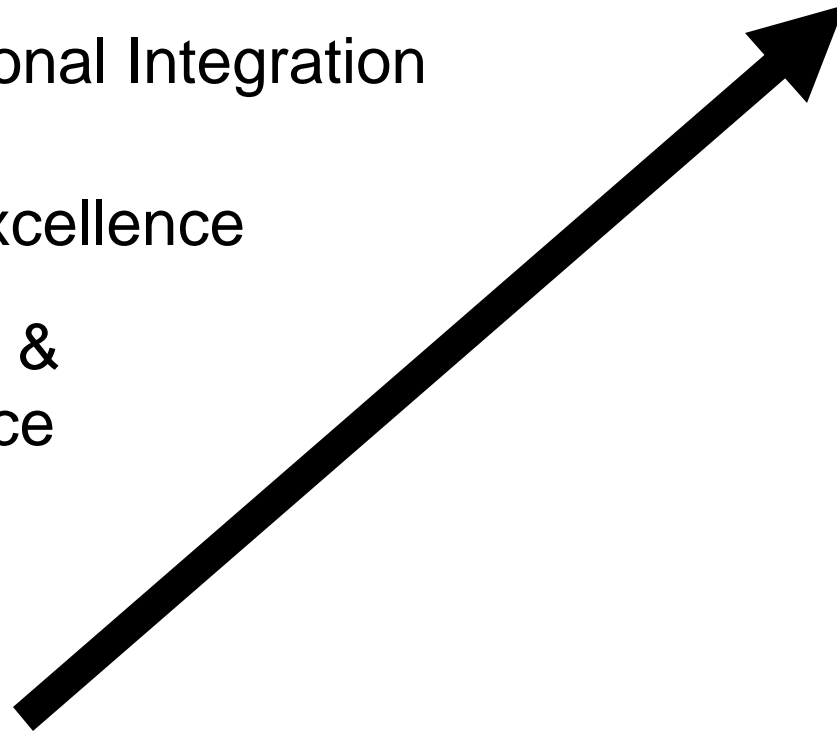
EMS/ Functional Integration

P2/Pursuit of Excellence

Acceptance &
Compliance

Tolerance

Denial



Sustainability in a Nutshell



Lessons Learned from the Business Community

- ✱ We're on a collision course with nature ... AND ... there's a profitable way out
- ✱ Economic productivity, individual and community needs, and environment are interdependent
- ✱ It's the system— Organizations need to view themselves as part of a complete system
- ✱ New/emerging technology greatly reduces environmental impact, at the same or better level of effectiveness.

Organizational Sustainability Balance...*the whole system*

Well-being

**Economy /
Mission**



Community

Environment

WHO NEEDS SOME CHOCOLATE?

A SURE CURE FOR DEPRESSION... AND HEADACHES...



Army Installation Sustainability Program

- **Long-range strategic program to ensure realistic training, combat readiness, and mission success**
 - ✓ **Discuss significant environmental impacts that threaten viability with local community**
 - ✓ **Establish 25 year strategic goals to reduce those impacts**
 - ✓ **Develop 5-year plans with objectives, targets, and resource requirements**

Federal Agency Case Study

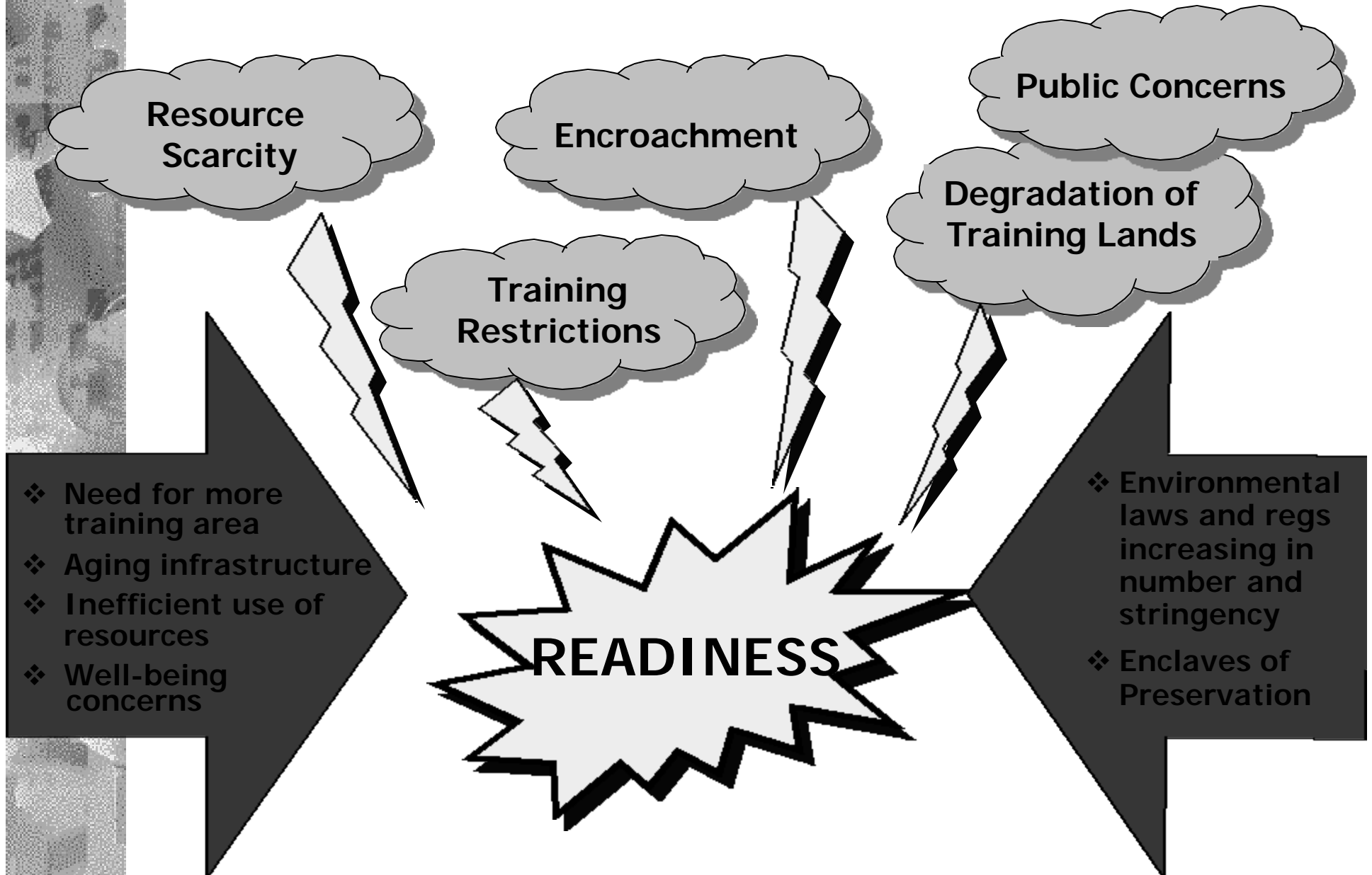
Fort Bragg



Home of the Airborne & Special Operations

Slides provided by Fort Bragg

The Situation





Goals

1. Reduce amount of water taken from Little River by 70% by 2025, from current withdrawals of 8.5 million gallons/day.
2. All water discharged from Fort Bragg will meet or exceed North Carolina state high quality water (HQP) standard, by 2025.
3. Landfill waste to be aggressively reduced toward 0 by 2025.
4. Meet minimum platinum standard for all construction by 2020 program, and renovate 25% of all existing structures to at least a bronze standard by 2020 (using the Sustainable Project Rating Tool – SPiRiT).
5. Adopt compatible land use laws/regulations with local communities by 2005



Goals (continued)

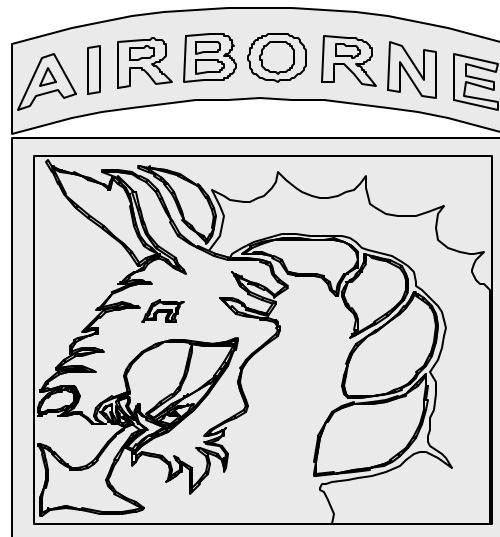
6. Reduce energy use in accordance with Executive Order 13123.
7. Develop and implement an effective regional commuting program by 2015.
8. Reduce the use of both gasoline and diesel in the non-tactical fleet by 70 percent by 2015 and 99 percent by 2025.
9. Develop an integrated environmental education program for Fort Bragg, its surrounding communities and interested parties.
10. Work towards 100% Environmentally Preferred Purchasing by 2025 for all purchases, including government purchase card, contract, and military requisition.



Some Quick Results

- ✱ 59% diversion of 600,000 tons of solid waste from landfill to recycling accomplished in 1 year.
- ✱ Revised installation building standards to reflect “green” construction. Impacts \$200M annual construction budget.
- ✱ Instituted use of Bio-diesel fuel at Range Control at a reduced cost of \$.04/gal.
- ✱ Reduced water consumption by 30% or 2.6M gallons/day.

Encroachment Case Study



Fort Bragg, North Carolina



SITUATION

- ✱ The NC Sandhills Region supports the second largest population of endangered red-cockaded woodpecker (RCW) in the US.
- ✱ The Endangered Species Act mandates that federal agencies (Fort Bragg) must bear primary responsibility for endangered species recovery.
- ✱ Longleaf pine and agricultural lands adjacent to Fort Bragg are being converted to other uses.
- ✱ The long-term sustainability of Fort Bragg depends upon ability to train and on environmental factors such as clean air and water.







SOLUTION

Private Lands Initiative (North Carolina Sandhills Conservation Partnership): partnership between Army, The Nature Conservancy (TNC), and other stakeholders

- Habitat protected on private land.
- Land acquired from **willing** sellers at market value.
- Costs shared and dollars leveraged.
- TNC officially holds land title or easement.
- TNC (or state agency) manages land.
- Allows Army to use of land for light training **and** to help meet ESA responsibility.

North Carolina Sandhills Conservation Partners



Fort Bragg



**Sandhills
Ecological
Institute**





Summary

- ✱ Sustainability is beginning to take hold at various levels – there is nothing to fear.
- ✱ Innovation is resolving hard problems and resulting in cost savings and more sustainable activities.
- ✱ Federal facilities can and are doing this with success.



A Challenge

**The most important
question in life is.....**

what to do next.

***Remember that part about
saving the world....???***